



Lesson Preparation book

Computer

3rd.Pre - Second Term - 2024



Prepared and Designed by / جروب فريق أصدقاء الكمبيوتر المتخصص

Yasmin Shoaeb



Teacher's Biography

Name:

School:

The educational administration:

Qualification:

Teaching Subject:

Comprehensive School:

The school to which he is delegated:

Date of appointment:

The job is on the staff:

Teacher Code:

Mobile Number:

Teacher

Supervisor

School Principal

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Daily class schedule

Session Day	First	Second	Third	Fourth	Fifth	Sixth	Seventh
Saturday							
Sunday							
Monday							
Tuesday							
Wednesday							
Thursday							

Session Day	First	Second	Third	Fourth	Fifth	Sixth	Seventh
Saturday							
Sunday							
Monday							
Tuesday							
Wednesday							
Thursday							

Teacher

Supervisor

School Principal

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Distribution of computer and information technology content

For 3rd .Prep - 2024

Second Term



Week	Activity	Accompanying activities
1	Chapter One Data •Data Types •Constant & Variables	•Training (1-1) •Training (1-2)
2	•Constant & Variables •Assignment	•Training (1-3) & (1-4) & (1-5)
3	•Priorities for implementing mathematical operations •Errors	•The student gives mathematical expressions and calculates them according to the priorities of the implementation of arithmetic operations. •Examples of different types of errors
4	•Solve the first chapter questions	
5	Chapter Two Branching •If...Then •If...Then..Else...	•Understanding converting a flowchart into an IF statement •Examples of different forms of a conditional expression •Training (2-1) & (2-2) & (2-3)
6	Branching •Select...Cas	•Training (2-4) •Training (2-5)
7	•Solve the second chapter questions	
8	Chapter Three Looping & Procedures •For...Next	•Training (3-1) •Training (3-2)
9	•Continued For... Next •Control the beginning, end, and increment of the For... Next statement	•Training (3-3) •Training (3-4)



Week	Activity	Accompanying activities
10	<ul style="list-style-type: none"> • Do while 	<ul style="list-style-type: none"> • Training (3-5) <p>Converting for clauses into do while</p> <ul style="list-style-type: none"> • Training (3-6)
11	<ul style="list-style-type: none"> • Procedure • Announcing the Sub 	<ul style="list-style-type: none"> • Training (3-7) • Training (3-8)
12	<ul style="list-style-type: none"> • Announcing a Function 	<ul style="list-style-type: none"> • Training (3-9)
	<ul style="list-style-type: none"> • Solve the third chapter questions 	
13	Chapter Four Cyberbullying	
14	<ul style="list-style-type: none"> • General Review 	



The General Objectives of Computer

- Providing students with the appropriate amount of scientific and basic knowledge and skills related to information technology.
- Develop basic scientific thinking skills with a focus on modern technological skills through their interaction with the computer.
- Training students to work in a team by practicing computer techniques.
- Developing self-education skills in order to access the correct information by themselves through the use of computers.
- Developing students' awareness of the importance of using computers in all areas of life.
- Students' appreciation of the role that computers play in problem solving.
- Students familiarize themselves with the computer and deal with its programs without intimidation.
- Developing the Egyptian personality capable of facing the challenges of the third millennium in the technology and information revolution.
- Acquiring the right ethics and behaviors in dealing with others through the means and tools of information and communication technology.

Teacher

Supervisor

School Principal

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The Specified Objectives of Computer

- Use of different data.
- Clarify the concept of personalization clause.
- Prioritizing the execution of calculations.
- Clarify the uses of the if...then conditional statement
- Using the If...Then...Else statement
- Define the concept of iterative loops.
- Define cyber bullying.
- Distinguishing forms of electronic infringement.
- Track the correct behavior in the face of electronic infringement.
- Request assistance from responsible individuals and bodies when exposed to electronic infringement.

Teacher

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Supervisor

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School Principal

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Date				
Session				
Class				



Chapter One (Data) Lesson (1) Types of data

Strategy

Brainstorming – dialogue and discussion

Teaching aids

whiteboard – Presentation – Electronic Book

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Identify the concept of data and its types.
- 2- Acquire the skill of dealing with different types of data.
- 3- Understand new concepts in the programming language such as constants and variables.

Warm up:

What is data? What are their types?

Lesson Presentation:

Visual Basic language deals with many types of data that are:

These data types include:

Data types			
Numeric		Character	Miscellaneous
Integer	Non - Integer		
Byte	Single	Char	Date
Short	Double		Boolean
Integer	Decimal	String	Object
Long			

Notice:

- Each type occupies storage space in the computer's memory, for example, the type (Integer) occupies 4 Bytes of memory size.
- Each type also has a minimum and maximum values called range.
- For example, the Byte statement type has a minimum value of 0 and a maximum of 255.

Constants: They are places reserved in the computer's RAM, take a value that does not change during the running of the program, such as: some mathematical constants, or some constants in physics

Naming rules of constants and variables:

- The name should appropriate of its purpose, and the variable name should begin with a letter (A-Z) or a sign (_).
- The name does not contain special symbols and signs (+, -, *, ^, ?)
- The name should not be one of the reserved words in the VB.NET language such as (me – end – print.....)

Evaluation:

Complete: One of the naming rules of constants and variables.....



Date				
Session				
Class				



Chapter One (Data) Lesson (2) Types of data

Strategy	Peer Learning – dialogue and discussion
Teaching aids	whiteboard – Presentation – E-Book

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Differentiate between constants and variables.
- 2- Declare constants and variables in a correct manner.
3. Recognizes the importance of the allocation clause.

Warm up:

What is the difference between constants and variables?

Lesson Presentation :

Constants Declaration

The **Const** command is used to declare constants in VB.NET language , as Presentation n by the following formula:

Const Constant_Name As Data Type = Value

Variables : Variables are places reserved in the computer's memory RAM , their value usually changes during the running of the program and the variable can take an **initial value** .

Variables Declaration

The **Dim** command is used to declare variables in VB.NET language, as Presentation n by the following formula:

Dim Variable_Name As Data Type = [Initial Value]

Note:

If the value of the constant is literal, it is placed in the "" signs, and if it is a date or time, it is placed in the ## signs.

Assignment clause

Assignment means placing or assigning a value to a constant or variable, and the assignment sentence is two parties with a sign (=) The left party represents the name of the variable or constant in which the value is received or stored on the right side, and this is illustrated by the following example : **Area = 5 * 3**

It is clear from the code that the product of the numbers 5 and 3 is assigned to the variable **Area**.

Evaluation:

Complete:

1- To declare constants uses (.....).



Date				
Session				
Class				



Strategy	Active Learning – Practical Training
Teaching aids	whiteboard – Presentation – E-Book

Chapter 1 (Data)

Lesson (3) Priority rules of Arithmetic operations and errors

Lesson objectives: By the end of the lesson, the student should be able to:

- 1- **Identify** the priorities of calculations.
- 2- **Manages** to solve some arithmetic problems.
- 3- **Realizes** the importance of the priorities of arranging calculations.

Warm up: **What** are the priorities for performing calculations?

Lesson Presentation : **Priority rules for Arithmetic operations:**

1. Applying the process inside the **brackets** from the inside to the outside.
2. Applying the **exponent**.
3. Applying **multiplication** or **division** process from left to right, wherever comes first.
4. Finally, the Application of the **addition** or **subtraction** process from left to right, wherever comes first..



Example A = 2 + 3 * 4:

The correct answer is not (20) but (14))

ERRORS:

There are three types of error:

Syntax Error: These are errors in the general syntax of language commands, for example:

Logic Error: These errors appear when we get error results after running the program, due to the formulation of arithmetic or logical expressions in an error that leads to error results.

Run Time Error: They are errors detected when running the program and are often in codes such as the customization clause.

Evaluation: **Complete:**
Types of errors..... ,

Date				
Session				
Class				



Chapter 1 (Data) Lesson (4) Solve chapter questions

Strategy

Dialogue and discussion – Training

Teaching aids

whiteboard – Presentation – E-Book

Lesson objectives:

By the end of the lesson, the student should be able to:

1. Mention the important information gained from chapter 1.
- 2- Solve the questions in the textbook.
- 3- Understand new concepts in the programming language such as constants and variables.

Warm up:

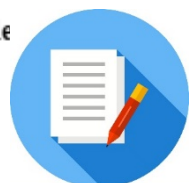
What are the most important definitions of the first Class?

Lesson Presentation :

NO.	Question	Answer
1	One of the advantages of VB.NET is dealing with different types of data.	()
2	One of disadvantage of VB.NET is dealing with different types of data.	()
3	All the data entered into the VB.NET program language are stored temporarily in the computer memory.	()
4	All types of data saved in the memory occupy the same storage space.	()
5	A good programmer is the one who improves the rationalization of storage space in the computer memory.	()
6	The value of the student's total grades is classified within the integer data types.	()
7	The value of the student's name is classified in the Miscellaneous data types.	()
8	The value of the student gender "male" or "female" is classified within the Miscellaneous data types "Boolean".	()
9	Image of a student can be classified within the character data types.	()
10	The value of the employee's salary can be classified within non-integer numeric data types.	()
11	Each data element stored in computer memory occupies a particular storage space and a particular range of values according to its data type.	()
12	The data element identifies the storage space it occupies in computer memory and knowing the minimum and the maximum for its value.	()
13	The term variables in vb.net means stores in the computer memory, which has type and name.	()
14	Declaring a variable in VB.NET means determining its name and data type.	()
15	The declaration of variables in the language VB.NET helps rationalize the use of the computer memory.	()
16	Declaration of variables is a matter of formality, because VB.NET languages recognize the variables and determine the type automatically.	()
17	The following statement "Dim F_name As String" is to declare the name of a variable "String" and type "F_name".	()
18	The following data element "Dim F_name As String" is to declare the name of a variable "F_name" and type "String".	()
19	The declaration statement for variables is determined by the variable name and type.	()
20	The declaration statement for the variables is determined by the name, type and fixed value.	()
21	"55City" variable name is a considered a wrong variable name because it begins with a number.	()
22	"55City" is considered a variable correct name.	()
23	"Name" is considered a correct variable name in event procedure level (enrichment).	()
24	"Name" is considered a correct variable name in form1 class level (enrichment).	()
25	"Dim" is used to declare variables.	()
26	"Dim" is used to declare constants.	()
27	The command "Const" is used in the declaration of the variables.	()
28	The command "Const" is used in the declaration of the constants.	()

Second: Select the appropriate answer to complete each of the following sentences:

- (1) The value of prices of desktop tools can be classified as..... data.
a) integer b) non- integer c) miscellaneous
- (2) The value of the names of the subjects can be classified as data.
a) miscellaneous b) non- integer c) string
- (3) The type of data element temporarily stored in the computer memory de
a) storage space and the extent of its value
b) Name and storage space
c) Storage space and a storage value
- (4) The right syntax to declare Salary variable is
a) Dim Salary As Integer b) Dim Salary As Byte c) Dim Salary As Decimal



Date				
Session				
Class				



Chapter 2 (Branching)

Lesson (1) Branching with IF...then

Strategy

Brainstorming – dialogue and discussion

Teaching aids

whiteboard –
Presentation – E-Book

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Recognizes conditional expressions.
- 2- Use the phrase If... then.
- 3- Feel the importance of branching in the language of VB.net.

Warm up:

What is branching?

Lesson Presentation :

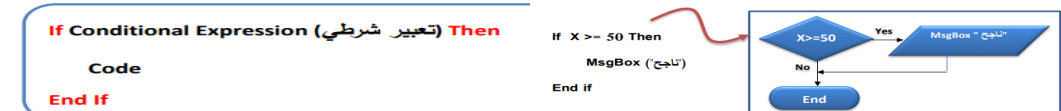
To clarify what is meant by conditional expression, we find that it consists of three parts:

- A logical sign preceded by a variable or constant.
- Abstract value or value of another variable or constant.
- The product of an arithmetic expression.

If the condition is met, it means that the result of the conditional expression **True** is executed a certain code, and if the condition is **not met**, it means that the result of the conditional expression is **False** and another code is executed.

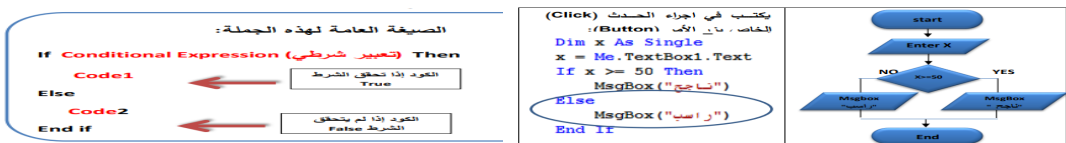
Branching using If..... Then

A conditional sentence or a branching sentence means that if the condition or conditional expression is fulfilled, then the code executes until it reaches the end of the if clause



Branching using If....Then... Else

This syntax is used if there is "Code1" that will be executed if the result of condition is "true", or another code "Code2" is executed if the result of condition is "False".



Evaluation:

Complete: Branching is.....

Date				
Session				
Class				



Chapter 2 (Branching) Lesson (2) Branching with Select...case

Strategy

Brainstorming – dialogue
and discussion

Teaching aids

whiteboard – Presentation –
E-Book

Lesson objectives:

By the end of the lesson, the student should be able to:

1. Differentiate between the sentence of... then and between the Select clause... case.
2. Write Select code... case in branching.
3. Recognize the importance of branching in the language of VB.net.

Warm up:

When to use the Select clause... case?

Lesson

Branching using Case Select.....

Presentation :

Case Select clause used when branching is dependent on the value of a variable
(Variable) is one and there are many conditions, which provides many codes and makes the code easier and clearer.

Select Case Variable

Case value1

code

Case value2

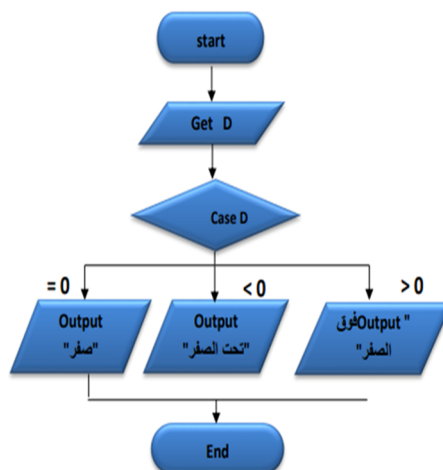
code

Case value3

code

Case else

code



```

Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click
    Dim degree As Single
    Try
        degree = Me.TextBox1.Text
        Select Case degree
            Case 0
                Me.Label2.Text = "صفر"
            Case Is < 0
                Me.Label2.Text = "تحت الصفر"
            Case Is > 0
                Me.Label2.Text = "فوق الصفر"
        End Select
    Catch ex As Exception
        MsgBox("ادخل عدد")
        Me.TextBox1.Focus()
        Me.TextBox1.Text = ""
    End Try
End Sub
  
```

Evaluation:

Mark ✓ or mark X:

You use the phrase **If. then** when the branching is on the value of one variable and there are many conditions ()

Date				
Session				
Class				



Chapter 2(**Branching**) Lesson (3) Solve chapter questions

Strategy

Brainstorming – dialogue and discussion

Teaching aids

whiteboard – Presentation – E-Book

Lesson objectives:

- By the end of the lesson, the student should be able to:
1. **Mention** important information gained from chapter 2.
 2. **Solve** the questions in the textbook.
 3. **Recognize** new concepts in the programming language such as conditional expression.

Warm up:

What are the most important definitions of Class Two?

Lesson Presentation :

(1) Answer the questions with the help of the following code:

```
If X >= 50 Then
    MsgBox("successful ")
End if
```

A- MessageBox is shown with the text "successful" when :

B- If the value of X equals 50, the result of executing code is.....

C- If the value of X equals 62, the result of executing code is

(2) Answer the following questions using the following code line:

If x<0 Then msgbox (العدد موجب) else msgbox (العدد سالب)

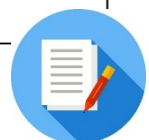
A- Write the conditional expression in the preceding statement:

B- The code to be executed when the condition is true is:

C- The code to be executed when the condition is false is:

(3) Answer the following questions with the help of the screen and the code in the table:"

Code	screen
<pre>Private Sub Button1_Click Dim x As Single x = Me.TextBox1.Text If x >= 50 Then MsgBox("ناجح") End If End Sub</pre>	



Date				
Session				
Class				



Chapter 3_Looping and procedures Lesson 1 For...Next

Strategy

Practical Training –
Cooperative Learning

Teaching aids

whiteboard –
Presentation – E-Book

Lesson objectives:

By the end of the lesson, the student should be able to:

1. **Mention** the concept of recursive loops.
2. **Use** the ... Next to execute code a specified number of times.
3. **Feel** the importance of recursive loops in VB.net language.

Warm up:

How do you repeat a specific command multiple times within a program?

Lesson Presentation :

Use of the phrase (For...Next)

Repetition sentence (**for...Next**) is a finite iteration sentence where it is used when we want to repeat a specific code of times.

الصيغة العامة لهذه الجملة :

For Variable = Start Value To End Value Step Add Value
Code
Next [Variable]

Where :

Variable: The name of the variable that represents the counter and its type must be numeric (integer or decimal).

Start Value: is the value of the beginning of the counter or the beginning of the iteration, which is a numeric value.

End Value: is a value that is also numerical value.

Add Value: the value of the counter increase or the value by which the counter increases until it reaches the end value.

Code: One or more commands to be repeated between the beginning and end of the loop (Next)).

Important Note:

1- If the value of the increase is positive 1, it is possible to dispense with writing Step Add Value, considering that the default value of the increase of the counter is positive 1.

2- Write the name of the meter variable next to **Next** optional.

Exercise:

Design the next form window so that a message box with numbers **1:3** appears when you press the Presentation numbers 1 to 3 button.



Evaluation:

Complete:

1- The Step coefficient in the **For...Next** it is.....

Date				
Session				
Class				



Chapter 3 **Looping and procedures** Lesson 2 Following For...Next

Strategy	Practical Training – Cooperative Learning
Teaching aids	whiteboard – Presentation – E-Book

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Display the numbers inside the textbox.
- 2- Set the Multiline property correctly.
- 3- Conclude some observations about the sentence For... Next

Warm up:

Can the amount of increase in repetitive sentences be controlled?

Lesson Presentation:

- The command (`Me.TextBox1.Text=""`) can be added before the loop to clear the contents of the textbox before executing the loop.

Display numbers inside the text box (Textbox) so that each number is in a new line by following the following:

- Multiline property is set to **True** for the **TextBox1** control tool to handle multiple lines in the text box.
- Modify the code inside the loop by adding the input key code (`vbCrLf`).

Control the beginning and end and the amount of increase in: For Next

- Other increment values can be specified after (**Step**), it may be a valid numeric value, a positive decimal value, or a negative.

Various examples of employing the For....Next sentence :

الكود	المثال	م
For I = 1 To 10 Step 2 Me.TextBox1.Text = Me.TextBox1.Text & I & vbCrLf Next	لعرض الأعداد الفردية من ١ إلى ١٠	١
For I = 2 To 10 Step 2 Me.TextBox1.Text = Me.TextBox1.Text & I & vbCrLf Next	لعرض الأعداد الزوجية من ٢ إلى ١٠	٢
For I = 3 To 20 Step 3 Me.TextBox1.Text = Me.TextBox1.Text & I & vbCrLf Next	لعرض الأعداد التي تقبل القسمة على ٣ من ٣ إلى ٢٠	٣
For I = 10 To 1 Step -2 Me.TextBox1.Text = Me.TextBox1.Text & I & vbCrLf Next	لعرض الأعداد الزوجية مرتبة تنازلياً من ١٠ إلى ٢	٤
For I = 1.5 To 0.5 Step -0.05 Me.TextBox1.Text = Me.TextBox1.Text & I & vbCrLf Next	لعرض الأعداد من 1.50 إلى 0.5 بتناقص كل 0.05 كل مرة.	٥
For I = 1 To B Step C Me.TextBox1.Text = Me.TextBox1.Text & I & vbCrLf Next	لعرض الأعداد من 1 إلى قيمة B بمعدل زيادة قيمة C.	٦

We conclude from the examples in the previous table:

- The **rate of increase** of the variable can be determined by the word (**Step**) and then write a value or numeric variable.
- The **rate of increase** should be **negative** if the starting value is greater than the end value.
- The start or end value or the **rate of increment** can be a decimal number, and in this case the loop variable must be defined from a type that accepts decimals, such as the single type.
- Any of the start or end value or the **rate of increase** can be a **variable**

Evaluation:

Complete:

1. Use a sentence..... to know how many repetitions in advance

Date				
Session				
Class				



Chapter 3_Looping and procedures

Lesson 3 Do...While

Strategy

Dialogue and Discussion – Brainstorming

Teaching aids

whiteboard – Presentation – E-Book

Lesson objectives:

By the end of the lesson, the student should be able to:

1. Recognize the use of the Do.. clause While.
2. Use the DO clause. While to execute code an indefinite number of times.
3. Deduce some commands for the DO ... While

Warm up:

Can the loop be implemented conditionally?

Lesson

Usage: Do..... While

Presentation:

The phrase **Do... While**:

To repeat a specific code for a number of **times whose end is not known** in advance, but based on a specific condition, so it is useful in the event that the number of repetitions is not known definitively.

الصيغة العامة لهذه الجملة:

Do While **Conditional Expression** **تعبير شرطي**
Code

The **code** between the beginning of the loop "**Do While**" and its end will be implemented as long as the conditional expression is **true**. If the **condition is not met for any reason**, we **get out of the iterative loop**, and implement the code after the Loop if it exists.

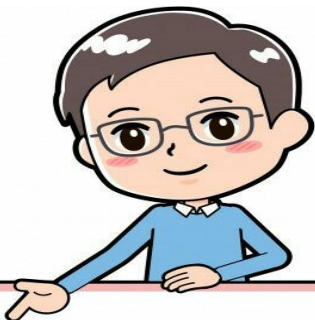
الطريقة الثانية	الطريقة الأولى
<pre>Dim N, i As Integer N = TextBox1.Text ListBox1.Items.Clear() i = 1 Do While i <= N ListBox1.Items.Add(i) i = i + 2 Loop</pre>	<pre>Dim N, i As Integer N = TextBox1.Text ListBox1.Items.Clear() For i = 1 To N Step 2 ListBox1.Items.Add(i) Next</pre>

Evaluation:

Complete:

1. Use a sentence..... To repeat a particular code for a number of unknown times

Date				
Session				
Class				



Chapter 3(**repetition and actions**))
Lesson (4) Procedures

Strategy	Dialogue and Discussion – Brainstorming
Teaching aids	whiteboard – Presentation – E-Book

Lesson objectives: By the end of the lesson, the student should be able to:
 1- **Recognize** the concept of the procedure.
 2- **List** the types of procedure.
 3- **Recognizes** the importance of various procedures.

Warm up: **What** are the procedures?

Lesson Presentation: **Procedures**
 A set of commands and instructions under a name, can be recalled by that name, so as to implement them, and create a (Sub) if we have a set of commands that are frequently used in more than one place in the class.

Types of procedures:
Sub does not return value. **Function** returns a value.

General format for declaring Sub:
 Sub Name (Parameters)
Code
 End Su

Whereas,:
Name expresses the name of the procedure
Parameters are the values that will be used within the procedure code when calling the procedure
Code: The set of orders and instructions that will be executed when the employees are called (**Sub**)
notice:

declaring an action, more than one **parameter** can be used..
 - When calling the procedure, specify values from outside the procedure called (**Argument**)).

Evaluation: **Complete:**
 1. Types of procedures.....



Date				
Session				
Class				



Chapter 3(repetition and actions))
Lesson (5) Function

Strategy

Active Learning –
Active Application

Teaching aids

whiteboard – Presentation
– E-Book

Lesson objectives:

By the end of the lesson, the student should be able to:

1. Recognize the concept of Function.
2. Acquire the skill of dealing with the function correctly.
3. Recognize the importance of the function.

Warm up:

What is a function?

Lesson

Declare the Function

Presentation:

A function is a set of commands under a specific name, preferably expressing their function, applied to inputs or parameters, and returning a value.

Function declaration formula:

Function Name (**Parameters**) As Datatype

Code

Return Value

End Function

Where:

Name: Expresses the name of the function.

Data Type: Specifies the statement type of the return value from the Function function.

Parameter: Represents the arguments that will be used in the Code.

Code: A set of commands and instructions that will be executed when the Function function is called .

Value: Value returned from the Function function.

Open the code window by pressing (F7)

Evaluation:

Put ✓ or X:

Procedure is declared once and calls any number of times ().

Date				
Session				
Class				



Chapter (4) Cyberbullying

Strategy	Active Learning – Training
Teaching aids	whiteboard – Presentation – E-Book

Lesson objectives: By the end of the lesson, the student should be able to:

1. Defines cyberbullying.
2. Identifies the means of cyber infringement.
3. Follows the correct behavior in the face of cyberbullying.

Warm up: What is cyberbullying?

Lesson Presentation: **Definition of Electronic Infringement:** It is intentional aggressive behavior by another robot through electronic communication media.

First: Forms of Cyber Infringement

1. Harassment
2. annoyance
3. embarrassment
4. intimidation
5. threat
6. Blackmailing

Electronic media are the techniques used by the electronic aggressor, and they are many, including the following:

Second: Electronic Media

1. Email.
2. Forums
3. Instant Message.
4. Facebook.
5. Blogger.

Third: Forms of electronic infringement

1. Anonymity
2. Harassment
3. Cyber stalking
4. Flaming
5. Outing
6. Exclusion
7. Cyber threats

Fourth: How to protect yourself from cyberbullying

- 1- Don't share your password with anyone.
- 2- Make a password that is difficult to predict.
- 3- Don't publish (post) any private data.
- 4- Avoid deleting Cyber bullying messages.
- 5- Don't interview anyone you know via the internet.
- 6- Be careful! Don't send any electronic messages when you are angry.
- 7- Inform your parents with what annoys you when you use the internet.
- 8- The download of software from the internet should be done under the supervision of your teacher or your parents.

Evaluation: Put ✓ or X:

1. Harassment and blackmail from forms of cyber infringement ()